

Abstract Submitted
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Deflation of elastic surfaces CATHERINE QUILLIET, Laboratory of Interdisciplinary Physics (ex “Spectro”) — The deflation of elastic spherical surfaces has been numerically investigated, and show very different types of deformations according the range of elastic parameters, some of them being quantitatively understood through simple theoretical considerations. In particular, the role of the Poisson ratio is closely investigated. This work allowed to retrieve various shapes observed on hollow deformable shells (from colloidal to centimeter scale), on lipid vesicles, or on some simple biological objects. Conversely, it shows how high deformations can tell observers about mechanical properties of a body. Such investigations have been extended to other geometries, in order to provide clues to understand deformations of vegetal or animal tissues.

Catherine Quilliet
Laboratory of Interdisciplinary Physics (ex “Spectro”)

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